

DECODING DATA FROM MULTIPLE SOURCES

CROSS-REFERENCE TO RELATED APPLICATIONS

E my The present application is a continuation of and claims the benefit of priority from U.S. Patent Application No. 09/419,444, filed October 15, 1999, ^{now U.S. Patent No. 6,654,921} which is incorporated herein by reference in its entirety.

BACKGROUND OF THE INVENTION

The present invention is related to digital communication systems and more particularly to systems and methods for operating communication systems where a single receiver processes information received from multiple sources.

A so-called point to multipoint communication system typically includes both a head end or central access point and multiple subscriber units. The central access point coordinates overall operation of the network. All communication is either to or from the central access point. Communication from the central access point to one or more subscriber units is referred to as downstream communication. Communication from a subscriber unit to the central access point is referred to as upstream communication.

So that multiple subscriber units can share a common transmission medium, there is typically multiplexing of upstream communication in either the time domain, frequency domain, or both. In the frequency domain, multiple subscriber units may transmit upstream simultaneously by employing different frequencies. Transmission capacity on any given frequency may be allocated to multiple subscriber units by assigning time frames to individual subscriber units for exclusive transmission. This